Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ink jet printhead comprising a multi-layer substrate, said multi-layer substrate comprising:

a silicon substrate;

drive transistors and CMOS interconnect layers formed on said silicon substrate;

a passivation layer covering said drive ~~circuitry~~ transistors and CMOS interconnect layers; and

a plurality of nozzles mounted on said passivation layer, each nozzle comprising:

a chamber adapted to contain an ejectable liquid; and,

at least one droplet ejection actuator associated with each of the chambers respectively, the droplet ejection actuator being electrically connected to a respective drive transistor and adapted to eject a droplet of the ejectable liquid from the nozzle,

wherein the chambers are at least partially formed by an amorphous ceramic material.

2. (Previously Presented) An ink jet printhead according to claim 1 wherein the drop ejection actuator is a heater element configured for thermal contact with a bubble forming liquid within the chamber; such that,

heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a droplet of the ejectable liquid from the nozzle corresponding to that heater element.

3. (Original) An ink jet printhead according to claim 1 wherein the amorphous ceramic material is silicon nitride.

4. (Original) An ink jet printhead according to claim 1 wherein the amorphous ceramic material is silicon dioxide.

5. (Original) An ink jet printhead according to claim 1 wherein the amorphous ceramic material is silicon oxynitride.

6. (Original) An ink jet printhead according to claim 2 wherein the ejectable liquid is the same as the bubble forming liquid.

7 (Original) An ink jet printhead according to claim 1 wherein the printhead is a pagewidth printhead.

8. (Withdrawn) An ink jet printhead according to claim 1 wherein the droplet ejection actuator is a paddle vane located within the chamber, the paddle vane being adapted to be actuated by a thermal actuator for ejecting a droplet of the ejectable liquid;

a thermal actuator located externally of the chamber and attached to the paddle vane, wherein the thermal actuator includes a plurality of separate spaced apart elongate thermal actuator units, which are interconnected at a first end to a substrate and at a second end to a rigid strut member.

9. (Withdrawn) An ink jet printhead as claimed in claim 8 wherein the rigid strut member is connected to a lever arm having one end attached to the paddle vane.

10. (Withdrawn) An ink jet printhead as claimed in claim 1 wherein the thermal actuator units operate upon conductive heating along a conductive trace, the conductive heating including generation of a substantial portion of the heat in an area adjacent the first end of each thermal actuator unit.

11. (Withdrawn) An ink jet printhead as claimed in claim 4 wherein said conductive heating includes a thinned cross-section adjacent said first end.

12. (Withdrawn) An ink jet printhead as claimed in claim 1 wherein the thermal actuator units comprise conductive heating layers which, in turn, comprise substantially either a copper nickel alloy or titanium nitride.

13. (Currently Amended) A printer system which incorporates an inkjet printhead, the printhead comprising a multi-layer substrate comprised of:

a silicon substrate;

drive transistors and CMOS interconnect layers formed on said silicon substrate;

a passivation layer covering said drive ~~circuitry~~ transistors and CMOS interconnect layers; and

a plurality of nozzles mounted on said passivation layer, each nozzle comprising:

a bubble forming chamber adapted to contain a bubble forming liquid; and,

at least one heater element disposed in each of the bubble forming chambers respectively, the heater elements being electrically connected to a respective drive transistor and configured for thermal contact with the bubble forming liquid; such that,

heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid from the nozzle corresponding to that heater element,

wherein the bubble forming chambers are formed of an amorphous ceramic material.

14. (Cancelled).

15. (Original) A printer system according to claim 13 wherein the amorphous ceramic material is silicon nitride.

16. (Original) A printer system according to claim 13 wherein the amorphous ceramic material is silicon dioxide.

17. (Original) A printer system according to claim 13 wherein the amorphous ceramic material is silicon oxynitride.

18. (Original) A printer system according to claim 14 wherein the ejectable liquid is the same as the bubble forming liquid.

19 (Original) A printer system according to claim 13 wherein the printhead is a pagewidth printhead.

20. (Withdrawn) A printer system according to claim 13 wherein the droplet ejection actuator is a paddle vane located within the chamber, the paddle vane being adapted to be actuated by a thermal actuator for ejecting a droplet of the ejectable liquid;

a thermal actuator located externally of the chamber and attached to the paddle vane, wherein the thermal actuator includes a plurality of separate spaced apart elongate thermal actuator units, which are interconnected at a first end to a substrate and at a second end to a rigid strut member.

21. (Withdrawn) A printer system as claimed in claim 20 wherein the rigid strut member is connected to a lever arm having one end attached to the paddle vane.

22. (Withdrawn) A printer system as claimed in claim 13 wherein the thermal actuator units operate upon conductive heating along a conductive trace, the conductive heating including generation of a substantial portion of the heat in an area adjacent the first end of each thermal actuator unit.

23. (Withdrawn) A printer system as claimed in claim 16 wherein said conductive heating includes a thinned cross-section adjacent said first end.

24. (Withdrawn) A printer system as claimed in claim 13 wherein the thermal actuator units comprise conductive heating layers which, in turn, comprise substantially either a copper nickel alloy or titanium nitride.

25 (Currently Amended) A method of ejecting drops of an ejectable liquid from an inkjet printhead, the printhead comprising a multi-layer substrate comprised of:

a silicon substrate;

drive transistors and CMOS interconnect layers formed on said silicon substrate;

a passivation layer covering said drive ~~circuitry~~ transistors and CMOS interconnect layers; and

a plurality of nozzles mounted on said passivation layer, each nozzle comprising:

a chamber adapted to contain an ejectable liquid; and,

at least one droplet ejection actuator associated with each of the chambers respectively, the droplet ejection actuator being electrically connected to a respective drive transistor,

wherein the chambers are at least partially formed of an amorphous ceramic material; the method comprising the steps of:

placing the ejectable liquid into contact with the drop ejection actuator; and

actuating the droplet ejection actuator using said drive circuitry such that a droplet of an ejectable liquid is ejected from the corresponding nozzle.

26. (Previously Presented) A method according to claim 25 wherein the drop ejection actuator is a heater element configured for thermal contact with a bubble forming liquid within the chamber; such that,
heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a droplet of the ejectable liquid from the nozzle corresponding to that heater element.

27. (Previously Presented) A method according to claim 25 wherein the amorphous ceramic material is silicon nitride.

28. (Previously Presented) A method according to claim 25 wherein the amorphous ceramic material is silicon dioxide.

29. (Previously Presented) A method according to claim 25 wherein the amorphous ceramic material is silicon oxynitride.

30. (Previously Presented) A method according to claim 26 wherein the ejectable liquid is the same as the bubble forming liquid.

31. (Previously Presented) A method according to claim 25 wherein the printhead is a pagewidth printhead.

32. (Withdrawn) A method according to claim 25 wherein the droplet ejection actuator is a paddle vane located within the chamber, the paddle vane being adapted to be actuated by a thermal actuator for ejecting a droplet of the ejectable liquid;

a thermal actuator located externally of the chamber and attached to the paddle vane, wherein the thermal actuator includes a plurality of separate spaced apart elongate thermal

actuator units, which are interconnected at a first end to a substrate and at a second end to a rigid strut member.

33. (Withdrawn) A method as claimed in claim 32 wherein the rigid strut member is connected to a lever arm having one end attached to the paddle vane.

34. (Withdrawn) A method as claimed in claim 25 wherein the thermal actuator units operate upon conductive heating along a conductive trace, the conductive heating including generation of a substantial portion of the heat in an area adjacent the first end of each thermal actuator unit.

35. (Withdrawn) A method as claimed in claim 29 wherein said conductive heating includes a thinned cross-section adjacent said first end.

36. (Withdrawn) A method as claimed in claim 25 wherein the thermal actuator units comprise conductive heating layers which, in turn, comprise substantially either a copper nickel alloy or titanium nitride.